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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/599,324

08/22/2008

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07/19/2011

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EXAMINER

HONG, DUNG

ART UNIT

PAPER NUMBER

2617

MAIL DATE

DELIVERY MODE

07/19/2011

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/599,324	Applicant(s) HERMANSSON ET AL.
	Examiner DUNG HONG	Art Unit 2617

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12/30/2010.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-20,22-28 and 30-34 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1,3-7,9,10,12-15,17-20,22-28 and 30-34 is/are rejected.
7) ☒ Claim(s) 8,11 and 16 is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|-------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>10/21/2010</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This is in response to applicant's communication filed on 12/30/2010, wherein:

Claim 1, 3-20, 22-28, 30-34 are pending.

Claim 5-6, 19-20, 22-24, 30-34 are amended.

Claim 2, 21, and 29 are cancelled.

Information Disclosure Statement

1. The information disclosure statement (IDS) submitted on 10/21/2010 was filed after the mailing date of the Non Final Action on 09/03/2010. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

With the current scope of the independent claim, the following documents are relevant in determining the patentability of the invention:

- Takayasu et al., Pub. No. JP 2000165283 A
- Ono, Pub. No. JP 2001111436 A

To expedite prosecution process, applicant is invited to amend the claim to overcome (1) the current ground of rejection and (2) the relevant documents listed above.

Response to Arguments

2. Applicant's arguments filed 12/30/2010 are summarized and addressed as below:

Claim Rejections under 35 USC § 112-1st

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Applicant has provided written description of specification (page 18 ln 10 – page 19 ln 1 of WO2005/094102), therefore, overcome 35 USC § 112-1st rejection of claim 12 and 15.

Claim Rejections under 35 USC § 112-2nd

Applicant amendments of claim 5, 19, 22-24, 26-34 have overcome 35 USC § 112-2nd rejection.

Claim Rejections under 35 USC § 103(a)

On page 12-14 of applicant response, applicant argues that the combined teaching of Costa and Shapira because the combined teaching does not discloses:

(1) a complete base station unit being designed as a separate docking unit locked in said support unit; a power supply unit; snap locking means arranged in said support unit and base station unit, allowing an easy installation/removal of said complete base station unit in/from said support unit.

(2) the base station of Costa is not considered as docking unit, applicant further cited definition of docking station.

(3) the combined teaching does not provide snap locking means for provide easy installation/removal.

Applicant arguments have been carefully considered, however, examiner respectfully disagrees.

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(1) applicant argument about the missing detail of “a power supply unit” in Costa is addressed by Shapira Fig. 8 and col. 9 ln 30-36 discloses supporting housing 124 of scalable base station unit contain cavity that including power supply circuit.

Other argument of (1) are related to (2) and (3), therefore, being addressed in the following paragraphs.

(1) and (2) Applicant does not specifically define details about a completed base station, examiner interpret “a complete base station” the broadest reasonable interpretation in light of specification: a base station. Costa discloses a complete base station unit (*Fig. 6 - base station unit 53 with antenna 54*) being designed as a separate docking unit locked in said support unit (*Fig. 6 and col. 6 ln. 10-21 and col. 6 ln. 42-55 discloses the base station element 53-54 is designed as docking unit installed by snap locking to the bracket 1*), applicant can also refer to further detail of how base station dock into the support structure as shown in fig 7 by using the snap locking function of element 63 snapping to element 64 as discussed in col. 6 ln 43-54.

Costa discloses the base station snap locking to the support unit as discussed in fig. 7 above, therefore, the base station is designed as a separate docking unit.

(1) and (3) Costa discloses the snap locking mechanism to attached the base station with support unit by using snap locking element 63 and 64 as discussed in col 6 ln 45 and fig. 7, therefore, allowing easy installation/removal. Also, the limitation “allowing an easy installation/removal of said complete base station unit in/from said support unit” is functional language and having relative meaning.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in **Graham v. John Deere Co., 383 U.S. 1, 148 USPQ 459 (1966)**, that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows: (*See MPEP Ch. 2141*)

- a. Determining the scope and contents of the prior art;
- b. Ascertaining the differences between the prior art and the claims in issue;
- c. Resolving the level of ordinary skill in the pertinent art; and
- d. Evaluating evidence of secondary considerations for indicating obviousness or nonobviousness.

4. **Claim 1 and 27** are rejected under 35 U.S.C. 103(a) as being unpatentable over ***Costa*** et al., Pat. No. US 6126128 A, in view of ***Shapira*** et al., Pat. No. US 6640110 B1

Re **claim 1**, *Costa* discloses a base station comprising:

a support unit (*Fig. 2 - third bracket 4;*) said support unit being adapted to be attached to a support structure (*col. 4 ln 47-65 and Fig. 1-2 discloses the third bracket 4 is adapted to attach to structure comprising bracket 2 and 3*), and

a complete base station unit mechanically supported by said support unit said complete base station unit (*Fig. 6 - base station unit 53 with antenna 54*) being designed as a separate docking unit locked in said support unit by cooperating snap locking means arranged in said support unit and base station unit, allowing an easy installation/removal of said complete base station unit in/from said support unit (*Fig. 6 and col. 6 ln. 10-21*

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and col. 6 ln. 42-55 discloses the base station element 53-54 is designed as docking unit installed by snap locking to the bracket 1; fig 7 by using the snap locking function of element 63 snapping to element 64 as discussed in col. 6 ln 43-54)

However, the reference is silent on further limitation that the support unit including a power supply unit

Shapira discloses scalable telecommunication device wherein the support unit include the power supply unit (*Fig. 8 and col. 9 ln 30-36 discloses supporting housing 124 of scalable base station unit contain cavity that including power supply circuit*) and also discloses the base station system comprising indoor base station unit (*Fig. 17 – IDU 262 with array antenna 266*)

Therefore, the combined teaching of Costa and Shapira would have rendered obvious the invention of claim 1 to implement scalable base station design for improving the flexibility in implement and upgrading the base station.

Re **claim 27**, the scope and content of the claim recites a cellular radio network including the base station of claim 1, therefore, being addressed as in claim 1 by the combined teaching of Costa and Shapira, the further limitation about macro and base station (*Fig. 17 discloses BTS 258 - macro base station - and indoor unit 262 - micro base station*)

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5. **Claims 3** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Costa** et al., Pat. No. US 6126128 A, in view of **Shapira** et al., Pat. No. US 6640110 B1, and **Djuphammar** et al., Pat. No. US 5394459 A.

Re **claim 3**, the combined teaching of Costa and Shapira discloses the invention of claim 1, wherein said power supply unit housed in said support unit (*Fig. 8 and col. 9 in 30-36 discloses supporting housing 124 of scalable base station unit contain cavity that including power supply circuit*), however, silent on further limitation about the AC/DC converter feeding said complete base station unit with a DC-voltage

discloses base station unit with support portion comprising power supply section comprising AC/DC converter (*col. 1 in 58 – col. 2 in 26 discloses power supply section of base station including ac/dc converter*)

Therefore, the combined teaching of Costa, Shapira, and Djuphammar would have rendered obvious the invention of claim 3 to provide DC power and implementing modular structure to base station

6. **Claim 4-6, 14, 17, and 34** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Costa** et al., Pat. No. US 6126128 A, in view of **Shapira** et al., Pat. No. US 6640110 B1 and **Stein**, Pat. No. 5771468

Re **claim 4**, the combined teaching of Costa and Shapira discloses the base station according to claim 1, however, silent on further limitation of claim 4

Stein discloses base station unit has a sandwich structure comprising a rigid metal back plate, a rigid metal front plate (*Fig. 2 and col. 4 ln 50-55 discloses the enclosure is aluminum, therefore, metal; Fig. 2A-2C discloses the enclosure has cover section 204 – front - and wall section 206 – back*), and a main circuit board attached intermediate said back plate and front plate (*Fig. 2D and col. 5 ln. 9-14 discloses component within enclosure; Fig. 4A-4B, Fig. 5-6 and col. 5 ln 35 - col. 6 ln 12 discloses circuit within enclosure, therefore main circuit*)

Therefore, the combined teaching of Costa, Shapira, and Stein would have rendered obvious the invention of claim 4 to improve the mobility and scalability of base station since multiple system can be incorporated into one base station enclosure.

Re **claim 5**, the combined teaching of Costa, Shapira, and Stein discloses the base station according to claim 4 further comprising cooling flanges (*Costa – fig. 6 and col. 6 ln 17-20 discloses heat sink in outer surface of base station; Stein – Fig. 2A and col. 4 ln 60-63 discloses cooling fin 210; Shapira – Fig. 7-8 col. 9 ln. 8-13, 41-43 discloses cooling fin for heat dissipation of inner circuit*).

Re **claim 6**, the combined teaching of Costa, Shapira, and Stein discloses the base station according to claim 4 and further discloses wherein said back plate's cooling flanges are arranged on the side facing away from said circuit board whereby said main circuit board is cooled by means of self-convection through said back plate (*Costa – fig. 6 and col. 6 ln 17-20 discloses heat sink in outer surface of base station; Stein – Fig. 2A*

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and col. 4 ln 60-63 discloses cooling fin 210; Shapira -- Fig. 7-8 col. 9 ln. 8-13, 41-43 discloses cooling fin for heat dissipation of inner circuit)

Re **claim 14**, the combined teaching of Costa and Shapira discloses the base station according to claim 1 however silent on further limitation about the handle portion of base station

Stein discloses base station apparatus wherein said base station comprises a handle at a side portion, allowing the base station to be carried (*Fig. 5-6 and col. 4 ln 50-58 discloses base station with handle*)

Therefore, the combined teaching of Costa, Shapira, and Stein would have rendered obvious the invention of claim 14 to provide convenient handle for carrying base station device

Re **claim 17**, the combined teaching of Costa and Shapira discloses the invention of claim 1, however silent on further limitation of claim 17

Stein discloses a base station wherein it comprises an internal antenna covered by a front cover of an electromagnetically transparent material (*Fig. 5-6 discloses the base station comprising RF units; Fig. 2 discloses the enclosure of the device including front and back. Therefore, the front cover is electromagnetically transparent to be able to perform communication*)

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Therefore, the combined teaching of Costa, Shapira, and Stein would have rendered obvious the invention of claim 17 to improve the mobility and scalability of base station since multiple system can be incorporated into one base station enclosure.

7. **Claim 7, 9, and 12** are rejected under 35 U.S.C. 103(a) as being unpatentable over *Costa* et al., Pat. No. US 6126128 A, in view of *Shapira* et al., Pat. No. US 6640110 B1, *Djuphammar* et al., Pat. No. US 5394459 A, and **Stein**, Pat. No. 5771468

Re **claim 7**, the combined teaching of Costa, Shapira, and Djuphammar discloses the base station according to claim 3, however silent on further limitation of claim 7

Stein discloses a base station unit wherein all circuits of a control processing block, a base band processing block and an RF block are arranged on said main circuit board (*Fig. 4A-4B, Fig. 5-6 and col. 5 ln 35 - col. 6 ln 12 discloses RF unit and logic unit for wireless communication, therefore, containing base band processing and RF elements*)

Therefore, the combined teaching of Costa, Shapira, Djuphammar, and Stein would have rendered obvious the invention of claim 7 to provide portable base station apparatus to improve mobility of the base station

Re **claim 9**, the combined teaching of Costa, Shapira, and Djuphammar discloses the base station as recited in claim 3, however silent on further limitation of claim 9

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Stein discloses base station apparatus comprising a transmission interface block realized in form of a separate circuit board, which is attachable to the main circuit board by means of a contact interface, thereby allowing an easy substitution of said circuit board (*abstract, Fig. 6 discloses the RF and logic unit is connected through PCMCIA slot and can be easily removed, therefore, attachable to main circuit board through interface*)

Therefore, the combined teaching of Costa, Shapira, Djuphammar, and Stein would have rendered obvious the invention of claim 9 to improve the flexibility in upgrading and configuring the base station since the RF and logic interface can be easily connected and replaced.

Re **claim 12**, the combined teaching of Costa, Shapira, Djuphammar, and Stein discloses the invention of claim 9 and further discloses wherein said snap locking means are realized by engagement between base station and supporting unit (*Costa — Fig. 6-7 discloses the base station 53 is snap locking supporting bracket 1*)

8. **Claim 10** is rejected under 35 U.S.C. 103(a) as being unpatentable over *Costa* et al., Pat. No. US 6126128 A, in view of *Shapira* et al., Pat. No. US 6640110 B1 and *Repco*, Pat. No. GB 1398570 A

Re **claim 10**, the combined teaching of Costa and Shapira discloses the invention of claim 1 however silent on further limitation about wherein said support unit comprises support members and said base station unit comprises cooperating hanger members

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which are devised to connect to said support members in a pivoting engagement, and wherein said snap locking means are included in said support unit and in said base station unit, which are devised to engage with each other by pivoting said base station unit

Repco discloses method and apparatus for engaging two piece of device wherein said support unit comprises support members of second unit comprises cooperating hanger members which are devised to connect to first unit in a pivoting engagement , and wherein said snap locking means are included in said first and second unit, which are devised to engage with each other by pivoting second unit (*Fig. 5-6 and page 2 in 90-115 discloses the battery - second unit - is designed to have hanger pin 29, 33 to engage with transceiver unit 25 - first unit -- by pivoting the second unit*)

Therefore, the combined teaching of Costa, Shapira, and Repco would have rendered obvious the invention of claim 10 to provide convenient latching mechanism in connecting base station to support unit

9. **Claim 13** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Costa** et al., Pat. No. US 6126128 A, in view of **Shapira** et al., Pat. No. US 6640110 B1, and **Tse**, Pub. No. US 20030069959 A1

Re **claim 13**, the combined teaching of Costa and Shapira discloses the base station according to claim 1, however, silent on further limitation of claim 13

Tse discloses method and apparatus for communication wherein base station comprises at least one interface for connecting an external alarm equipment with a

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control processing circuit of said base station, thereby allowing the establishment of a communication channel between said external alarm equipment and a central alarm station ([0004]-[0005] discloses EMS system that collect alarms from network element such as base station – therefore, external alarm equipment – and further processing alarm for one or more manager which is other EMS entities – central alarm station; Fig. 3 and [0019] discloses alarm management system AMS 100 for collecting alarms and reporting to manager device 54)

Therefore, the combined teaching of Costa, Shapira, and Tse would have rendered obvious the invention of claim 13 to provide efficient alarm reporting for network element, therefore, improving the network performance

10. **Claim 15** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Costa** et al., Pat. No. US 6126128 A, in view of **Shapira** et al., Pat. No. US 6640110 B1, **Tse**, Pub. No. US 20030069959 A1, and **Stein**, Pat. No. 5771468

Re **claim 15**, the combined teaching of Costa, Shapira, and Tse discloses the base station according to claim 13, however silent on further limitation of claim 15 about the handle portion of base station device

Stein discloses base station apparatus wherein said base station comprises a handle at a side portion, allowing the base station to be carried (*Fig. 5-6 and col. 4 ln 50-58 discloses base station with handle*)

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Therefore, the combined teaching of Costa, Shapira, Tse and Stein would have rendered obvious the invention of claim 15 to provide convenient handle for carrying base station device

11. **Claim 18-20, 25, and 34** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Stein**, Pat. No. 5771468, in view of **Shapira** et al., Pat. No. US 6640110 B1, and **Gibson** et al., Pat. No. US 6160699 A

Re **claim 18**, Stein discloses a base station unit having a sandwich structure (*Fig. 2B-2C discloses sandwich structure of base station*) comprising :

a rigid metal back plate, a rigid metal front plate (*Fig. 2 and col. 4 ln 50-55 discloses the enclosure is aluminum, therefore, metal; Fig. 2A-2C discloses the enclosure has cover section 204 -- front - and wall section 206 -- back*), and a main circuit board attached intermediate said back plate and front plate (*Fig. 2D and col. 5 ln. 9-14 discloses component within enclosure; Fig. 4A-4B, Fig. 5-6 and col. 5 ln 35 - col. 6 ln 12 discloses circuit within enclosure, therefore main circuit*)

wherein all circuits of a control processing block, a base band processing block and an RF block are arranged on said main circuit board (*Fig. 4A-4B, Fig. 5-6 and col. 5 ln 35 - col. 6 ln 12 discloses RF unit and logic unit for wireless communication, therefore, containing base band processing and RF elements*)

However, Stein discloses the power supply unit is comprised within based station (*Fig. 2D*) and silent on further limitation about connection to RNC, antenna

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Shapira discloses scalable base station structure comprising a base station unit having an interface for connection to a radio network controller, RNC (*Fig. 17 discloses base station system having base station BTS connect to BSC which is equivalent to Radio Network Controller*), and to an antenna (*Fig. 8 and col. 9 ln 30-55 discloses the transmission block with interfacing with receiving block, therefore, antenna*), and also discloses the base station system comprising indoor base station unit (*Fig. 17 – IDU 262 with array antenna 266*)

Therefore, it would have rendered obvious to combine the teaching of Stein and Shapira to implement scalable base station design for improving the flexibility in implement and upgrading the base station

However, the combined teaching is silent on details about interfacing to a power supply

Gibson discloses method and apparatus for mounting telecommunication equipment wherein the equipment is mounted in rack and provide power to load (*col. 1 ln 12-24 discloses cabinet enclosure comprising power supply unit; Fig. 6 and col. 7 ln 40-50 discloses back up power – power supply unit – for distributing power into loads in cabinet*)

Therefore, the combined teaching of Stein, Shapira, and Gibson would have rendered obvious the invention of claim 18 to provide separate power supply for the base station therefore, improving reliability of power supply

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Re **claim 19**, the combined teaching of Stein, Shapira, and Gibson discloses the invention of claim 18 and further discloses the base station further comprises cooling flanges (*Shapira – Fig. 7-8 col. 9 ln. 8-13, 41-43 discloses cooling fin for heat dissipation of inner circuit*).

Re **claim 20**, the combined teaching of Stein, Shapira, and Gibson discloses the base station as recited in claim 19, wherein said cooling flanges are arranged on a side facing away from said circuit board, and wherein said main circuit board is cooled by means of self-convection of said back plate (*Stein – Fig. 2A and col. 4 ln 60-63 discloses cooling fin 210 facing away from circuit inside the base station enclosure; Shapira – Fig. 7-8 col. 9 ln. 8-13, 41-43 discloses cooling fin for heat dissipation of inner circuit*)

Re **claim 25**, the combined teaching of Stein, Shapira, and Gibson discloses the base station as recited in claim 18, and further discloses wherein a transmission interface block is realized on a separate circuit board, which is attachable to the main circuit board by means of a contact interface, thereby allowing the easy substitution of said circuit board (*Stein - abstract, Fig. 6 discloses the RF and logic unit is connected through PCMCIA slot and can be easily removed, therefore, attachable to main circuit board through interface*)

Re **claim 34**, the combined teaching of Stein, Shapira, and Gibson discloses the base station of claim 18, and further discloses the step of assembly the base station

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comprising steps of placing the back plate on an assembly support; placing the circuit board on the back plate; attaching the circuit board to the back plate; placing the front plate on the circuit board; and attaching the front plate to the back plate (*Stein Fig. 2 discloses the base station comprising front cover 205 – front plate - and wall section 206 – back plate, and circuit reside on back plate as shown in fig 2D. Therefore, it is obvious that the assembly of the unit involve step of placing circuit in back plate and attaching front and back plate steps*)

12. **Claim 22 and 24** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Stein**, Pat. No. 5771468, in view of **Shapira** et al., Pat. No. US 6640110 B1, and **Gibson** et al., Pat. No. US 6160699 A and **Holmes**, Pat. No. US 6180876 B1

Re **claim 22**, the combined teaching of Stein, Shapira, and Gibson discloses the base station as recited in any of claims 18, however silent on further limitation about border portion that dividing main circuit board in section and the front plate has border to engaged with inner wall to engage with border portion

Holmes discloses method and apparatus for separating portion of circuit to shield electromagnetic field wherein the circuit area are divided into area by wall (*col. 3 ln 57 – col. 4 ln 43 and Fig. 1 discloses printed circuit board with wall frame 10 and lid 18 to separate portion and provide shielding to different component*)

Therefore, the combined teaching of Stein, Shapira, and Gibson, and Holmes would have rendered obvious the invention of claim 22 to provide adequate shielding to components on circuit board.

Re **claim 24**, the combined teaching of Stein, Shapira, and Gibson discloses the base station as recited in claim 18 further discloses wherein main circuit board is between the front and back plate comprising control processing block and radio frequency block (*Stein - abstract, Fig. 6 discloses the RF and logic unit is connected to base station circuit*), however, silent on further limitation about the electromagnetically shielded compartments

Holmes discloses method and apparatus for separating portion of circuit to shield electromagnetic field wherein the circuit area are divided into area by wall (*col. 3 ln 57 – col. 4 ln 43 and Fig. 1 discloses printed circuit board with wall frame 10 and lid 18 to separate portion and provide shielding to different component*)

Therefore, the combined teaching of Stein, Shapira, and Gibson, and Holmes would have rendered obvious the invention of claim 24 to provide adequate shielding to components on circuit board.

13. **Claim 23 and 26** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Stein**, Pat. No. 5771468, in view of **Shapira** et al., Pat. No. US 6640110 B1, and **Gibson** et al., Pat. No. US 6160699 A and **Costa** et al., Pat. No. US 6126128 A

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Re **claim 23**, the combined teaching of Stein, Shapira, and Gibson discloses the invention of claim 18, however, silent on further limitation of claim 23.

Costa discloses base station comprise a front plate comprises a mechanical interface for attaching an internal antenna, and wherein said antenna is covered by a front cover of an electromagnetically transparent material (*Costa – Fig. 6 and col. 6 ln 10-16 discloses antenna 54 was covered by solar shield 55 – front plate. It is obvious that the front plate 55 has to be made by electromagnetically transparent for the antenna to transmit and receive signal*)

Therefore, it would be obvious for an ordinary skill in the art at the time of the invention to modify the combined teaching of Stein, Shapira, and Gibson with Costa to provide radio service at base station.

14. **Claim 26** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Stein**, Pat. No. 5771468, in view of **Shapira** et al., Pat. No. US 6640110 B1, and **Gibson** et al., Pat. No. US 6160699 A, **Costa** et al., Pat. No. US 6126128 A, **Holmes**, Pat. No. US 6180876 B1

Re **claim 26**, the combined teaching of Stein, Shapira, and Gibson with Costa discloses the base station according to claim 23, further discloses wherein said circuit board, a base band processing block and a DC/DC block of said circuit board (*Stein - Fig. 2D and col. 5 ln. 9-14 discloses component within enclosure; Fig. 4A-4B, Fig. 5-6 and col. 5 ln 35 - col. 6 ln 12 discloses circuit within enclosure, therefore main circuit. Fig.*

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2D discloses DC/DC block; Fig. 6 disclose RF unit for communication and logic therefore, base band processing block), however, the combined teaching is silent on further limitation about those component are shielded in separate compartment with other circuits

Holmes discloses method and apparatus for separating portion of circuit to shield electromagnetic field wherein the circuit area are divided into area by wall (*col. 3 ln 57 – col. 4 ln 43 and Fig. 1 discloses printed circuit board with wall frame 10 and lid 18 to separate portion and provide shielding to different component*)

Therefore, the combined teaching of Stein, Shapira, Gibson, Costa, and Holmes would have rendered obvious the invention of claim 26 to provide adequate shielding to components on circuit board.

15. **Claim 28 and 32-33** are rejected under 35 U.S.C. 103(a) as being unpatentable over *Costa* et al., Pat. No. US 6126128 A, in view of *Shapira* et al., Pat. No. US 6640110 B1, and *Haakana* et al., Pat. No. US 6411809 B1

Re **claim 28**, the scope and content of the claim recites method for installing the base station of claim 1 by assembling the mechanical structure together, therefore, being addressed as in claim 1 by Costa and Shapira. The further limitation of claim is address as following:

connecting the base station unit to a radio network controller of said network
(*Shapira – Fig. 17 discloses base station 258 is connected to the network controller BSC*)

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256), to an antenna (*Shapira - Fig. 8 and col. 9 ln 30-55 discloses the transmission block with interfacing with receiving block, therefore, antenna*), and to said power supply unit (*Fig. 8 and col. 9 ln 30-36 discloses supporting housing 124 of scalable base station unit contain cavity that including power supply circuit, therefore, connecting to power supply unit in order to the base station to function*) ; and

Haakana discloses method and apparatus for connecting network element to network comprising step of downloading application software and office data from a management tool to said base station unit, allowing the establishment of a communication channel between said base station unit and said RNC (*col. 5 ln 9-16 and col. 5 ln 38-55 discloses downloading software and network parameter to base station unit for connecting to base station controller*)

Therefore, the combined teaching of Costa, Shapira, and Haakana would have rendered obvious the invention of claim 28 to improve the method of configuring the communication network since manual configuration is reduced.

Re **claim 32**, the combined teaching of Costa, Shapira, and Haakana discloses the method as recited in claim 28, comprising the step of: connecting said management tool directly to said base station unit by means of a Local Management Tool, for direct downloading of said application software and office data to the base station unit (*Haakana - col. 5 ln 9-16 and col. 5 ln 38-55 discloses downloading software and network parameter to base station unit for connecting to base station controller, the base*

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station which is network element under the base station controller that download software to the base station, therefore, local management tool)

Re **claim 33**, the combined teaching of Costa, Shapira, and Haakana discloses the method as recited in claim 28, comprising the step of: connecting said management tool to a central radio network controller, RNC, of said network, for downloading of said application software and office data to the base station through said network (*Haakana – Fig. 5 discloses the BSC is connected to MSC and MNS – central radio network controller; col. 5 ln 9-16 and col. 5 ln 38-55 discloses downloading software and network parameter to base station unit through network*)

16. **Claim 30** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Costa** et al., Pat. No. US 6126128 A, in view of **Shapira** et al., Pat. No. US 6640110 B1, **Haakana** et al., Pat. No. US 6411809 B1 and **Repco**, Pat. No. GB 1398570 A

Re **claim 30**, the combined teaching of Costa, Shapira, and Haakana discloses the method according to claim 28, however, silent on further limitation of claim 30

Repco discloses method and apparatus for engaging two piece of device wherein said support unit comprises support members of second unit comprises cooperating hanger members which are devised to connect to first unit in a pivoting engagement , and wherein said snap locking means are included in said first and second unit, which are devised to engage with each other by pivoting second unit (*Fig. 5-6 and page 2 ln 90-115*)

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discloses the battery - second unit - is designed to have hanger pin 29, 33 to engage with transceiver unit 25 - first unit -- by pivoting the second unit)

Therefore, the combined teaching of Costa, Shapira, Haakana, and Repco would have rendered obvious the invention of claim 30 to provide convenient latching mechanism in connecting base station to support unit

17. **Claim 31** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Costa** et al., Pat. No. US 6126128 A, in view of **Shapira** et al., Pat. No. US 6640110 B1, **Haakana** et al., Pat. No. US 6411809 B1, and **Tse**, Pub. No. US 20030069959 A1

Re **claim 31**, the combined teaching of Costa, Shapira, and Haakana discloses he method according to claim 28 further comprising the steps downloading software and network parameter to base station for establishing communication with other network element (*Haakana - col. 5 ln 9-16 and col. 5 ln 38-55 discloses downloading software and network parameter to base station unit for connecting to base station controller*), however, silent on further limitation about connecting external equipment and establishing communication channel between alarm equipment and central alarm station

Tse discloses method and apparatus for communication wherein base station comprises at least one interface for connecting an external alarm equipment with a control processing circuit of said base station, thereby allowing the establishment of a communication channel between said external alarm equipment and a central alarm station (*[0004]-[0005] discloses EMS system that collect alarms from network element*

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such as base station -- therefore, external alarm equipment -- and further processing alarm for one or more manager which is other EMS entities -- central alarm station; Fig. 3 and [0019] discloses alarm management system AMS 100 for collecting alarms and reporting to manager device 54)

Therefore, the combined teaching of Costa, Shapira, Haakana and Tse would have rendered obvious the invention of claim 31 to provide efficient alarm reporting for network element, therefore, improving the network performance.

Allowable Subject Matter

Claim 8, 11, and 16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DUNG HONG whose telephone number is (571) 270-7928. The examiner can normally be reached on Monday-Friday from 8:00 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, JINSONG HU, can be reached on (571) 272-3965. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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